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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/687,078	10/16/2003	James Chen	930074-2012	9085

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EXAMINER

VU, HIEN D

ART UNIT PAPER NUMBER

2833

DATE MAILED: 08/11/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/687,078

Applicant(s)

CHEN ET AL.

Examiner

Hien D. Vu

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
 Paper No(s)/Mail Date ____.
- 4) ☐ Interview Summary (PTO-413)
 Paper No(s)/Mail Date ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

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1. The following is a quotation of the appropriate paragraphs of 35

U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

2. (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1, 4 are rejected under 35 U.S.C. 102(e) as being anticipated by

Kukitda et al.

The disclosure of Kukita provides a complete response to each and every element set forth in the claims. For example: Figs. 1 & 5 show a dielectric substrate 2 having a top surface read as the recited first mounting surface, a bottom surface read as the recited first mounting surface, a bottom surface read as the recited second mounting surface, terminal mounting holes 21, a plurality of conductive terminals 4 each having a coupling end portion 43 and a solder tail 44 bent to form a solder contact.

As to claim 4, the solder contact of each terminal is generally L-shaped.

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 2, 3 and 5-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kukita et al in view of McHugh et al.

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As to claims 2, 3, 6, in absence of any showing of criticality by the applicant to form each solder contact of the terminals to be generally U-shaped or a loop would have obvious of modification since such changes solve no stated problem.

As to claim 5, Kukita does not show the second mounting surface of the substrate with a plurality of bumps each of which is disposed adjacent to a corresponding one of the mounting holes and each of the solder tails being bent to extend under a corresponding one of the bumps. McHugh, Figs. 4-6 show a second mounting face 105 of the substrate 104 with a plurality of bumps 122 each of which is disposed adjacent to a corresponding one of the mounting holes 120 and each of the solder tails (112, 114) being bent to extend under a corresponding one of the bumps. It would have been obvious to one with skill in the art to modify the connector of Kukita by forming the second mounting face with bumps adjacent the mounting holes and each of the solder tails to be bent under a corresponding one of the bumps, as taught by McHugh, in order to provide an over-forming for the solder tail. As to claim 7, the bump are formed with a semi-cylindrical shape.

As to claim 8, the solder contacts 44 are generally L-shaped.

6. Kassa et al, Lin et al (348), Lin et al (558) and Noda et al are cited for disclosure of electrical connectors having PGA packages.

7. Any inquiry concerning this communication should be directed to Hien D Vu at telephone number (571) 272-2016.

Vu/ds

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07/27/04

A handwritten signature in black ink, appearing to read "Hien Vu".

HIEN VU
PRIMARY EXAMINER